Message

From: karendannemiller[Ex. 5 Deliberative Process (DP)] [karendannemiller@[Ex. 5 Deliberative Process (DP)]
on behalf of Karen Dannemiller [karen.dannemiller@yale.edu]
Sent: 5/5/2015 7:37:42 PM
To: Cooper, Glinda [Cooper.Glinda@epa.gov]
CC: Megan.Sandel@bmc.org
Subject: Re: Formaldehyde - asthma control article in Indoor Air 2013

Dear Dr. Cooper,

Thank you for your interest in our article. Responses to your questions are below:

1) We did not perform a direct comparison in homes of this method compared to longer sampling methods. However, we do have the following information.

a) There are known fluctuations in indoor formaldehyde concentrations, and this method provides a snapshot view of a moment in time. Several studies have found formaldehyde levels to be fairly consistent over time in homes within the same season (Stock 1987, Hodgson 2000, Hodgseon 2004), but there are seasonal, diurnal, and other random fluctuations. We accounted for season by initially including it as a categorical variable (last paragraph of results) and it was dropped because it was not significant. The asthma questionnaire was also filled out at the same time as the measurement (in the same season). For diurnal variations, all measurements were taken during the main portion of the day (not at night). We also asked about open windows to have some control for random fluctuations.

b) We took measures to ensure that the measurement itself was consistent. The pump flow rate was measured before each sampling event and sampling time adjusted appropriately. We also validated the pump flow to be consistent over periods of time much longer than required for sampling.

c) The accuracy was validated in the lab with formaldehyde permeation tubes that release formaldehyde at a known rate (Methods, paragraph 2).

Based on this information, we feel that the formaldehyde concentrations measured were indicative of longer-term trends that were important for the period of time during which asthma severity was measured.

2) Yes this is the paper that is referred to and the recruitment was the same. The 70 homes were a subset of this larger study. Megan might have more to say about this than me.

Best wishes as you complete your review and please don't hesitate to contact us if you have additional questions.

Best,

Karen

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On Tue, May 5, 2015 at 12:32 PM, Cooper, Glinda <Cooper.Glinda@epa.gov> wrote:

Dear Dr. Dannemiller and Dr. Sandel:

I am working on a review of the effects of formaldehyde on allergic conditions and asthma as part of the US EPA's toxicological review of formaldehyde. I had some questions about your 2013 Indoor Air paper (attached), and hope that you can help me.

1) Do you have any data from this study, or other studies, comparing this 30-minute sampling method to longer measurement periods?

2) I was hoping to find some more information about the recruitment and selection of the study population. The paper mentions a manuscript about the Boston Allergen Sampling Study – I found this reference –

Sandel M et al. A side-by-side comparison of three allergen sampling methods in settled house dust.

J Expo Sci Environ Epidemiol. 2014 Nov;24(6):650-6. doi: 10.1038/jes.2014.30. Epub 2014 May 7.

Is this the manuscript that is referred to in the Indoor Air paper?

This paper says that "…At all homes at least one person between the ages of 4–64 years had doctor-diagnosed asthma and had lived in their current residence for at least 6 months. Subjects were recruited either from past asthma study cohorts, Boston Medical Center asthma clinics, newspaper ads or referred by other subjects. The study was approved by the Boston University/Boston Medical Center Institutional Review Board…"

Does this description apply to the 70 homes included in the formaldehyde study, too?

Although there are many studies of asthma prevalence (in adults or children), there are few studies examining indoor formaldehyde levels in relation to **asthma control** among children with asthma. I would like to get as much information as I can on these studies since they are focusing on a particularly susceptible population.

Thank you for your assistance. If there is another co-author from the study that would be better for me to talk to, please let me know.

Glinda Cooper

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